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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|---|---------------------|------------------|
| 09/844,296      | 04/30/2001  | Aaron W. Buchwald   | 1875.0560002        | 1034             |
| 26111           | 7590        | 04/21/2005  |                     | EXAMINER         |
|                 |             | STERNE, KESSLER, GOLDSTEIN & FOX PLLC<br>1100 NEW YORK AVENUE, N.W.<br>WASHINGTON, DC 20005 |                     | PERILLA, JASON M |
|                 |             |   | ART UNIT            | PAPER NUMBER     |
|                 |             |   | 2634                |                  |

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/844,296             | BUCHWALD ET AL.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Jason M Perilla        | 2634                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 November 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-7,9-14,16-20,22-25 and 27-36 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 16,17,19,22-24 and 32-36 is/are allowed.  
 6) Claim(s) 1 is/are rejected.  
 7) Claim(s) 2-7,9-14,18,20,25 and 27-31 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 09 November 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

1. Claims 1-7, 9-14, 16-20, 22-25, and 27-36 are pending in the instant application.

### ***Drawings***

2. The replacement drawing sheets of figures 9 and 10 were received on November 9, 2004. These drawings are accepted by the Examiner.

### ***Response to Arguments/Amendments***

3. The rejections of claims 9 and 22 under 35 U.S.C. § 112, first paragraph, set forth in the office action dated August 9, 2004 have been withdrawn in view of the amendments to the claims filed November 9, 2004 and the in person interview on November 8, 2004.

4. The prior art rejections of claims 1-26 under 35 U.S.C. § 102(e) as being anticipated by Evans et al (US 6002279) set forth in the office action dated August 9, 2004 have been withdrawn in view of the amendments to the claims filed November 9, 2004.

5. This office action is in response to the Amendment filed November 9, 2004.

### ***Claim Objections***

6. Claims 3, 4, 8-11, 14-17, 19, 20, and 24 are objected to because of the following informalities:

Regarding claim 3, in lines 4 and 7, "phase controls" should be replaced by – phase control--.

Regarding claim 12, in line 2, "the component" should be replace by –the plurality of component--.

Regarding claim 13, in lines 2-3, "each of the signal sets" should be replaced by –each one of the plurality of signal sets–, in line 5, "each of the ring segments" should be replaced by –each of the plurality of ring segments–, and, in lines 6-7, "each of the ring segments" should be replaced by –each of the plurality of ring segments–.

Regarding claim 14, in lines 2-3, "each of the signal sets" should be replaced by –each one of the plurality of signal sets–, in line 4, "each of the plurality" should be replaced by –each one of the plurality–, and, in lines 5-6, "the corresponding signal sets" should be replaced by –the corresponding one of the plurality of signal sets–.

Regarding claim 18, in lines 4 and 7, "phase controls" should be replaced by –phase control–.

Regarding claim 20, in line 1, "futher" should be replaced by –further–.

Regarding claim 25, in lines 2-3, "the component signals" should be replaced by –the plurality of component signals–.

Regarding claim 28, in line 2, "processors" should be replaced by –processor–.

Appropriate correction is required.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/844432. Although the conflicting claims are not identical, they are not patentably distinct from each other because the broader claim 1 of the instant application would be obvious in view of the narrower claim 1 of Application No. 09/844432 (hereafter '432). Claim 1 of the instant application recites the limitation "a phase interpolator adapted to produce a timing signal", and claim 1 of '432 recites "a phase interpolator adapted to derive a sampling signal". The generation of a timing signal is equivalent to the generation of a sampling signal. Claim 1 of the instant application recites the limitation "a phase controller adapted to derive a rotator control signal", and claim 1 of '432 recites "a controller ... adapted to generate a rotator control signal". It is obvious that the controller of '432 is a "phase" controller. The additional limitations regarding the controller in claim 1 of '432 are not present in the phase controller of the instant application, and therefore, claim 1 of the instant application merely broadens the scope of claim 1 of '432. Further, claim 1 of the instant application includes "a phase control signal rotator adapted to rotate the plurality of phase control signals in response to the rotator control signal" while claim 1 of '432 includes "a control signal rotator adapted to manipulate the control signals in response to the rotator control signal". It is obvious the limitations of claim 1 of '432 read on the limitations of claim 1 of the instant application. Further, it has been held that the omission of an element and

its function is an obvious expedient if the remaining elements perform the same functions as before. See *In re Karlson*, 136 USPQ 184 (CCPA 1963). Also note *Ex Parte Rainu*, 168 USPQ 375 (BdPatApp&Int 1970); omission of a reference element whose function is not needed would be obvious to one skilled in the art. In this case, the omission of some elements of the [phase] controller of claim 1 of '432 is held to be obvious because the remaining elements perform the same function as claim 1 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

9. Claims 2-7, 9-14, and 27-31 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. Claims 16-20, 22-25, and 32-36 are indicated to contain allowable subject matter.
11. The following is a statement of reasons for the indication of allowable subject matter:

Claims 16-20, 22-25, and 32-36 are indicated to contain allowable subject matter because the prior art of record does not anticipate or obviate all the limitations in the independent claims 1 and 12. With the amendment of November 9, 2004, the prior art reference Evans et al (US 6002279) no longer anticipates the claimed limitations. Specifically, Evans et al does not disclose a phase interpolator which derives a data

sampling signal to be placed upon a data path and a phase sampling signal to be placed upon a phase path.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art of record not relied upon above is cited to further show the state of the art with respect to the recovery of timing information.

U.S. Pat. No. 5581585 to Takatori et al.

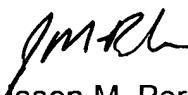
13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jason M. Perilla  
April 14, 2005

jmp

  
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